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DEVICE, METHOD, SOFTWARE AND DATA CARRIER COMPRISING SOFTWARE FOR DISPLAYING INFORMATION ON A SCREEN

The present invention relates to a device, method, software and data carrier comprising software for displaying information on a screen.

The applicant for the present patent application

5 has for some time been supplying software which is able to display two information areas on a screen. In this software there are displayed information objects about which further information is available in the system. If a user wishes to see such further information, it is

10 displayed in the right-hand information area after clicking on such an information object display.

In order to improve the convenience of use and/or the processing flexibility of such a system, the present invention provides a device comprising a memory and a

15 processing unit for displaying information on at least one screen, comprising:

- first display means for displaying at least two display areas, such as a frame or a window, on the screen,

20 - second display means for displaying inside one of the display areas selectable information objects about which further information is available,

- selection means for selecting one of the selectable information objects,

25 - choosing means for choosing a displayed display area and/or screen in which the further information relating to the selectable information can be displayed.

An advantage of such a device is that systems with information areas can be operated flexibly in simple

30 manner. With the present development of larger screens, a plurality of information areas can be realized on a screen. It is also possible to provide such a device

with more than one screen, whereby the information areas
to be displayed can be displayed over a larger
information display area on the screens. User
convenience is also great in that the user can

5   him/herself determine in which other display area
information will be shown. The user can hereby input
his/her own wishes as to where which information will be
displayed, whereby the user for instance quickly knows
where he will be able to retrieve which information on

10 the screen or screens.

     In a preferred embodiment the choosing means
comprise means for displaying a context menu. The
information objects about which further information can
be retrieved are marked in the output display area in a

15 manner recognizable to the user. In a known system as
described in the foregoing, after selection of the
information object about which the further information
has to be displayed, this further information was always
displayed in the right-hand information area. Even when

20 the information object itself was displayed in the
right-hand information area, the further information
relating to the information object was also displayed in
the right-hand information area. The information
displayed in this right-hand screen and comprising the

25 information object was hereby overwritten by the further
information of the information object. In the present
embodiment the user can select a context menu by means
of for instance a so-called right mouse click. In this
context menu are then listed different options for

30 displaying the further information relating to the
information object. Menu options herefor are for
instance a display area above or below the present
display area, a display area to the left or right of the
present display area or for instance a display area on

35 another screen.

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.In a further preferred embodiment, the choosing means comprise means for displaying selectable icons. Such icons can function in similar manner to the selection options of a context menu as in the previous

5   embodiment. An advantage of such icons is that the user can view the menu information in intuitive manner or by means of a graphic display. This makes the device more user-friendly.

A further aspect of the present invention provides

10 a method for determining a second display area for . displaying information relating to an information object by means of a device comprising a memory and a processing unit for displaying information on at least one screen, comprising steps for:

15   - displaying at least two display areas, such as a frame or a window, on a. screen,

- displaying inside one of the display areas selectable information objects about which further information is available,

20   - selecting an information object in a first display area,

- displaying choosing means,

- choosing a display area and/or a screen in which the further information relating to the selectable

25 information will be displayed,

- displaying the further information in the chosen display area.

A further aspect according to the present invention relates to a data carrier comprising a computer program

30 which, when executed by means of a processing unit, can.. perform a method as specified in the foregoing.

A further aspect according to the present invention . relates to software for performing a method as specified in the foregoing by means of a computer.

Advantages of these aspects according to the present invention are described above.

Further advantages, features and details of the present invention will be described with reference to
5 the annexed figures, in which:

- figure 1 shows a block diagram of an embodiment according to the present invention;

- figure 2 is a flow diagram of a further embodiment according to the present invention.

10 An embodiment according to the present invention (fig. 1) comprises two screens 4,7 which are coupled to a computer 5 comprising a central processor unit 6 and a memory 8. The device further comprises a mouse 10 and a keyboard 12. Displayed on the screens are windows, which
15 can each have sub-windows (frames). The overall screen layout of the embodiments of figures 3 and 4 are shown on the screens of figure 1. The sub-windows can be designated with the general term of information area or display area. Such an information or display area is
20 used to display information by means of software which runs on central processor unit 6 and information about which is stored in memory 8. In per se known manner the software and the processing unit can run in a remotely placed computer, while the screen and the user are at a
25 different location, by means of a so-called distributed system.

The software which displays information in the information areas is for instance a database program, a diary program, a contact information program and the
30 like. Such programs are able to display information and information objects or data objects, wherein further or background information relating to the information objects is available which can be retrieved. For this purpose an information object is displayed recognizably
35 on a screen, for instance by underlining thereof. If the

user of the computer system wishes the further
information to be displayed, according to the present
invention he/she can cause this information to be
displayed in a window or frame to be further determined.

5   For this purpose he makes use of the method according to
figure 2.

In step 21 (fig. 2) the display areas or frames or
windows are shown. In step 22 the selectable information
objects are shown in at least one of the display areas.

10 The user who has determined about which information
object he/she wishes to view the further information
selects this information object in step 23. In step 24
choosing means are then displayed in the vicinity of the
information object. It is possible here to envisage a

15 context menu with several menu options or a set of icons
which represent a choice. Such a set of icons can for
instance be displayed in the form of a quadrant or in
the form of a circle, wherein the placing of an icon
indicates the direction in which the information must be

20 displayed or the position of the window in which the
information is displayed. Depending on the desired
setting of the user, the choosing means such as the
context menu or the icons can be displayed automatically
when the mouse cursor is placed at the position of the

25 information object, or can be displayed after the user
has entered a command to this effect, for instance by
means of the right mouse button or a keystroke on the
keyboard.

The display area is then chosen in step 25. It is

30 possible here to choose from a display on the left-hand
side, the right-hand side, the bottom or the top of the
present screen in which the selected information object
is displayed.

In step 26 further information is then displayed in

35 the chosen window. This process can be repeated in that

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information objects with their own further information
are for instance also situated in the further
information. In this case the user can choose to
display, in a window to be chosen, this renewed further
5 information in similar manner as described in the
foregoing.

According to a further embodiment, the new window
to be displayed can be situated in for instance a second
display area of a second screen. In such an embodiment,
10 the choosing means can be provided with extra
designations which indicate whether the same screen
should be used, or a screen other than that in which the
information object is displayed. A two-step context menu
can for instance be used for this purpose, where in the
15 first step a choice of screen is made and then, once the
screen has been chosen, in step 27 a second context menu
determines the choice of window within the screen. This
option is useful when there is frequent switching of
screen. If there is frequent switching of windows within
20 a screen, an extra choice, as to whether the present
screen or a new screen must be used for the further
information of the information object, can be added by
means of a sub-context menu to the context menu as
described in the previous embodiment per screen to be
25 chosen which is available as standard within the present
screen.

A further alternative is that, in the context menu
of a system with two or more screens, all possible
choices for each screen are displayed, wherein the
30 number of possible choices times the number of screens
determines the number of alternatives to be chosen from
the context menu or the icons.

Figure 3 shows an embodiment in which three sub-
windows 31, 32, 33 are displayed on screen 30. The top
35 left window 31 has been made graphically recognizable by

means of a V pattern. The right-hand window 33 is made
recognizable by means of a + pattern. The bottom left
window 32 is made recognizable by means of a triangle
pattern. In figure 3A the window 32 at bottom left is

5   blank, since this is the window in which an information
object 34 is selected. Information objects are displayed
by means of underlined rectangles 39, while standard
displayed information is displayed by means of non-
underlined rectangles. The actually selected information

10   object is displayed by means of an underlined
parallelogram 34.

      When selecting information object 34, about which
display of further information is desired, a context
menu 35 is displayed in the form of a small graphic

15   representation of the whole screen, for instance by
means of a mouse click. This small display comprises a
small display 36 of the upper left window, a small
display 37 of the so-called active window 32, as well as
a small display 38 of right-hand window 33. In the small

20   displays 36, 37 and 38 is displayed the graphic pattern
of the large respective windows. A user who wishes to
display the further information of information object 34
can click in intuitive manner on one of the small
displays of the large windows, on the basis of which

25   further information of information object 34 will be
displayed in the associated window. Figure 3B shows in
similar manner the possibility that the information
object is situated in window 31. In this case this
window 31 has a blank display and windows 32 and 33 are

30   designated by means of a graphic pattern. After
selection of information object 34, the screen-like
context menu 35 is displayed, whereafter the user can
select the desired window for display of the further
information. In similar manner this whole is shown in

35   figure 3C, wherein the so-called active window with the

data object 34 to be selected is now displayed in the right-hand window. The context menu 35 for this window 33 is likewise displayed. The user can herein make a selection from the small displays 36 an 37 of context

5　menu 35. In these figures 3A-C information objects are designated with 39 and the selected data object is designated with 34.

Figure 4 shows a corresponding screen layout wherein windows 41, 42 and 43 are numbered 1, 2 and 3 in

10　the title bar of the window. In the quick menus which are shown in the successive figures in the respective windows, a selection can be made from the numbers of the other windows. In figure 4A a context menu 45 with menu options 1 and 2 is here shown in window 3, in figure 4B

15　a quick menu 45 with menu options 2 and 3 is shown in window 1, and in figure 4C a context menu with menu options 1 and 3 is shown in window 2.

Just as in figure 3 the windows in context menu 35 are designated with graphic patterns, in an alternative

20　embodiment this can be realized by means of for instance colours. A further embodiment is to give a window a name and display this name in a context menu instead of for instance the numbers of context menus 45. In addition to applying a context menu, the use of a quick menu is also

25　possible.

In a further embodiment the choice can be indicated for displaying the further information by means of an auditive or a voice command. It is for instance possible here to say: "further information relating to

30　information object 34 to window 2". The program will then display the further information relating to data object 34 in window 2.

The above described embodiments can be varied relative to each other to obtain other embodiments. The

35　rights sought are defined by the appended claims.